L10 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1997:195710 CAPLUS
DN 126:190944
TI Oral or topical warming compounds comprising phosphate derivatives
IN Kupper, Philip Lloyd
PA The Procter and Gamble Company, USA
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07F009-12
ICS A61K007-16; A61K009-20; A61K009-48; C07F009-24; C07F009-18
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 79
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9702273 | A1 | 19970123 | WO 1996-US10194 | 19960612 |
| | W: AU, BR, CA, CN, JP, MX, NO, SG, TR | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | AU 9662769 | A1 | 19970205 | AU 1996-62769 | 19960612 |
| | EP 837862 | A1 | 19980429 | EP 1996-921572 | 19960612 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI | | | | |
| | JP 11508593 | T2 | 19990727 | JP 1996-505145 | 19960612 |
| PRAI | US 1995-498103 | | 19950705 | | |
| | WO 1996-US10194 | | 19960612 | | |

OS MARPAT 126:190944
AB Oral or topical compns. useful in providing a perceived sensation of warmth comprise phosphate derivs. and a pharmaceutically acceptable carrier. A cough syrup contained dextromethorphane hydrobromide 0.1326, guaifenesin 1.3263, granular sugar 54.1280, Tween 80 0.0199, glycerin 1.9999, propylene glycol 17.9100, sodium citrate 0.5194, citric acid anhyd. 0.3363, potassium sorbate 0.0995, and **vanillyl** alc. Bu **ether** monophosphate (prepn. given) q.s. 100%.
ST oral topical warming compd phosphate deriv; cough syrup **vanillyl** butyl **ether** phosphate
IT Natural products, pharmaceutical
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Senna; oral or topical warming compds. comprising phosphate derivs.)
IT Drug delivery systems
(capsules; oral or topical warming compds. comprising phosphate derivs.)
IT Drugs
(gastrointestinal; oral or topical warming compds. comprising phosphate derivs.)
IT Capsicum annuum annuum
(longum group; oral or topical warming compds. comprising phosphate derivs.)
IT Drug delivery systems
(lozenges; oral or topical warming compds. comprising phosphate derivs.)
IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(mustard; oral or topical warming compds. comprising phosphate derivs.)
IT Resins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**oleoresins**; oral or topical warming compds. comprising phosphate derivs.)
IT Analgesics
Anise

Antihistamines
Antitussives
Capsicum frutescens
Chimaphila
Clove (Syzygium aromaticum)
Coolants
Decongestants
Expectorants
Flavoring materials
Ginger
Horseradish (Armoracia lapathifolia)
Influenza
Pepper (spice)
Peppermint (Mentha piperita)
Spearmint (Mentha spicata)
Sweetening agents
(oral or topical warming compds. comprising phosphate derivs.)

IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oral or topical warming compds. comprising phosphate derivs.)

IT Birch (Betula)
(sweet; oral or topical warming compds. comprising phosphate derivs.)

IT Drug delivery systems
(syrups; oral or topical warming compds. comprising phosphate derivs.)

IT Capsicum
(tincture; oral or topical warming compds. comprising phosphate derivs.)

IT 187595-47-7 187595-48-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oral or topical warming compds. comprising phosphate derivs.)

IT 187595-46-6P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(oral or topical warming compds. comprising phosphate derivs.)

IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-06-7, Allyl isothiocyanate 59-67-6, Niacin, biological studies 60-29-7, Ether, biological studies 64-17-5, Ethyl alcohol, biological studies 67-66-3, Chloroform, biological studies 100-51-6, Benzyl alcohol, biological studies 104-55-2 119-36-8, Methyl salicylate 122-48-5, Zingerone 123-51-3 138-86-3, Limonene 141-78-6, Ethyl acetate, biological studies 404-86-4, Capsaicin 555-66-8, Shogaol 1490-04-6, Menthol 5533-03-9, **Vanillyl** alcohol methyl **ether** 13184-86-6 14193-29-4 19408-84-5, Dihydrocapsaicin 20279-06-5, Homodihydrocapsaicin 27113-22-0, Paradol 28789-35-7, Nordihydrocapsaicin 58253-27-3, Gingerol 58493-48-4, Homocapsaicin 70150-56-0 81995-38-2 81995-39-3 81995-41-7 81995-42-8
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(oral or topical warming compds. comprising phosphate derivs.)

IT 10025-87-3, Phosphoric trichloride 82654-98-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(oral or topical warming compds. comprising phosphate derivs.)

IT 57-50-1, Sucrose, biological studies 60-12-8, Benzeneethanol 69-65-8, Mannitol 78-70-6 89-80-5, Menthone 89-83-8, Thymol 93-14-1, Guaifenesin 97-53-0, Eugenol 100-52-7, Benzaldehyde, biological studies 103-90-2, Acetaminophen 104-45-0, Dihydroanethole 104-46-1, Anethole 105-54-4, Ethylbutyrate 113-92-8, Chlorpheniramine maleate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 123-92-2, Isoamyl acetate 125-69-9, Dextromethorphan hydrobromide 127-41-3, .alpha.-Ionone 128-44-9, Sodium saccharin 140-67-0, Estragole 147-24-0, Diphenhydramine hydrochloride 154-41-6, Phenylpropanolamine hydrochloride 345-78-8, Pseudoephedrine hydrochloride 470-82-6, Eucalyptol 550-70-9, Triprolidine hydrochloride 562-10-7 1009-11-6

4422-70-2 4940-11-8, Ethyl maltol 6485-40-1, L-Carvone 15687-27-1, Ibuprofen 22204-53-1, Naproxen 22839-47-0, Aspartame 39711-79-0, n-Ethyl-p-menthane-3-carboxamide 51115-67-4 53956-04-0, Monoammonium glycyrrhizate 55589-62-3, Acesulfame k 87061-04-9, 3-1-Menthoxypropane 1,2-diol
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oral or topical warming compds. comprising phosphate derivs.)

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L10 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2001:581442 CAPLUS
DN 135:157391
TI A composition causing different skin sensations
IN Nakatsu, Tetsuo; Mazeiko, Peter J.; Lupo, Andrew T., Jr.; Green, Carter B.; Manley, Charles H.; Spence, David J.; Ohta, Hideaki
PA Takasago International Corp., Japan
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM A61K007-48
CC 62-4 (Essential Oils and Cosmetics)
Section cross-reference(s): 17, 63
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 1121927 | A2 | 20010808 | EP 2001-400266 | 20010202 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | BR 2001000254 | A | 20011002 | BR 2001-254 | 20010201 |
| | JP 2001279227 | A2 | 20011010 | JP 2001-27361 | 20010202 |
| PRAI | US 2000-498592 | A | 20000204 | | |

AB The present invention is directed to a sensate compn. including at least one cooling sensate, warming sensate and tingling sensate. The tingling sensate is at least one of Jambu **Oleoresin** and **Spilanthol**. The present invention is further directed to a method of using the sensate compn. in a food, pharmaceutical or personal care product. A compn. contained ethanol 55.0, propylene glycol 28.0, N-ethyl-2-isopropyl-5-methylcyclohexacarboxamide 3.0, isopulegol 8.0, Jambu **oleoresin** 2.5, **vanillyl** bu **ether** 3.0, and mouthwash herbal flavor base 0.5 % by wt.

ST skin sensation compn; mouthwash compn
IT Alcoholic beverages
Antiperspirants
Deodorants
Food additives
Mouthwashes
Pepper (Piper nigrum)
Perfumes
Zanthoxylum piperitum
(compn. causing different skin sensations)
IT Cosmetics
(creams; compn. causing different skin sensations)
IT Cosmetics
(lotions; compn. causing different skin sensations)
IT Drug delivery systems
(lozenges; compn. causing different skin sensations)
IT Drug delivery systems
(ointments; compn. causing different skin sensations)
IT Resins
RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**oleoresins**; compn. causing different skin sensations)
IT Essential oils
RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peppermint; compn. causing different skin sensations)
IT Essential oils
RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(spearmint; compn. causing different skin sensations)
IT Drug delivery systems

(topical; compn. causing different skin sensations)
IT Essential oils
RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wintergreen; compn. causing different skin sensations)
IT 89-79-2, Isopulegol 89-80-5, Menthone 94-62-2, Piperine 404-86-4, Capsaicin 495-91-0, Chavicine 1321-60-4, Trimethylcyclohexanol 2216-51-5 2444-46-4 13184-86-6, **Vanillyl** ethyl **ether** 17162-29-7, Menthyl lactate 25394-57-4, **Spilanthol** 39711-79-0 42822-86-6, p-Menthane-3,8-diol 58253-27-3, Gingerol 63187-91-7 68527-74-2 68527-76-4 77341-67-4 81995-38-2, **Vanillyl** propyl **ether** 82654-98-6, **Vanillyl** butyl **ether** 110866-25-6, Sanshool I 159131-97-2, Sanshoamide 195863-84-4 207792-35-6 207844-02-8 207844-03-9 207844-04-0 207844-07-3 207844-08-4 207844-09-5 352430-69-4 352430-70-7 352430-71-8 352515-13-0, Sanshool II
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(compn. causing different skin sensations)

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2000:761926 CAPLUS
DN 133:325517
TI Dentifrices containing functional substances to mask offensive tastes and enhance refrigerant effect
IN Konishi, Atsushi; Kashiwagi, Mitsuyoshi
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K007-16
ICS A61K007-26
CC 62-7 (Essential Oils and Cosmetics)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2000302655 | A2 | 20001031 | JP 1999-109432 | 19990416 |

AB Dentifrices contain the functional substances, e.g. those having pungent taste, sourness, or astringency, to make aftertaste fine. The dentifrices may be those showing water content .ltoreq.5% and addnl. contg. heat-generating substances such as anhyd. zeolites, anhyd. MgSO4, dextrin, Na metaphosphate, and/or CaCl2. Addn. of piperine to a dentifrice contg. CaCO3, sorbitol, saccharin Na, propylene glycol, CM-cellulose, carrageenan, paraben, Na lauryl sulfate, flavor, and H2O completely masked offensive taste and had refreshing aftertaste. Capsaicin, **vanillyl** Bu **ether**, citric acid, malic acid, tartaric acid, Al lactate, etc., also had similar effect.
ST dentifrice offensive taste masking pungent substance; piperine masking dentifrice offensive taste; sour substance masking dentifrice offensive taste; astringent substance masking dentifrice offensive taste
IT Zeolites (synthetic), biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(anhyd., heat-generating substance; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)
IT Taste
(astringency; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)
IT Dentifrices
Mouthwashes

Sourness
(dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT Tannins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT Resins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**oleoresins**, Capsicum; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT Capsicum
(**oleoresins**; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT Taste
(pungency; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT 50-81-7, Ascorbic acid, biological studies 77-92-9, Citric acid, biological studies 87-69-4, Tartaric acid, biological studies 94-62-2, Piperine 110-17-8, Fumaric acid, biological studies 404-86-4, Capsaicin 6915-15-7, Malic acid 7487-88-9, Magnesium sulfate, biological studies 18917-91-4, Aluminum lactate 82654-98-6, **Vanillyl** butyl **ether**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

IT 9004-53-9, Dextrin 10043-52-4, Calcium chloride, biological studies 50813-16-6, Sodium metaphosphate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(heat-generating substance; dentifrices contg. substances having pungent taste, sourness, or astringency to give refreshing aftertaste by masking offensive tastes and enhancing refrigerant effect)

poration of active agent in liposomes
is well known and reference may be made to a variety of patents and treatises. For example, liposomes or lipidic particles can be prepared in accordance with U.S. Pat. No. 5,783,211 (Manzo et al.) or U.S. Pat. No. 5,077,057 (Szoka, Jr.), or can be formed from nonphosphal lipid components which have the potential to form lipid bilayers is disclosed in Biochim. Biophys. Acta., 19:227-232 [1982], the disclosures of which are incorporated herein by reference. A general discussion of techniques for preparation of liposomes and of **medication** encapsulating liposomes can be found in U.S. Pat. No. 4,224,179 (Schneider). Further examples of liposome encapsulation techniques and products can be found in U.S. Pat. No. 5,356,633 (Woodle, et al.); U.S. Pat. No. 5,376,380 (Kikuchi, et al.); U.S. Pat. Nos. 5,446,070, 5,332,576 and 5,234,957 (Mantelle); U.S. Pat. No. 5,447,930 (Nayak); U.S. Pat. No. 5,470,579 (Bonte, et al.); U.S. Pat. No. 5,476,852 (Cauwenbergh); U.S. Pat. No. 5,514,374 (Bonte, et al.); U.S. Pat. No. 5,514,712 (LeClere); U.S. Pat. No. 5,519,020 (Smith, et al.); U.S. Pat. No. 5,476,651 (Meybeck, et al.); U.S. Pat. No. 5,034,228 (Meybeck, et al.); U.S. Pat. 4,942,038 (Wallach); U.S. Pat. No. 5,188,837 (Domb); U.S. Pat. 4,946,683 (Forssen); U.S. Pat. No. 5,169,631 (Rase et al.); U.S. Pat. No. 5,137,725 (Handjani et al.); Ann. Rev. Biophys. Bioeng. 9:467 (1980); U.S. Pat. No. 4,235,871, incorporated herein by reference. The preparation of multilamellar vesicles (MLVs) by thin-film processing U.S. Pat. No. 4,737,923, incorporated by reference.

DETD An active agent which can provide a **tingling** sensation, which may make lipstick more interesting, particularly to the recipient of oral contact, is **jambu** (**jambu** oleoresin, an extract from Spilanthes acmella). **Jambu** is a plant extract, identified by CAS Nr. 90131-24-1, FEMA Nr. 3783, and EINECS Nr. 290-335-0. It is commercially available as a viscous liquid, dark brown, comprising 15-20% ethanol, 15-17% spilanthol (HPLC), with a flash point of 24.degree. C., from Robertet S. A., Grasse, Codex, France. It has a tongue **tingling** effect at 50 to 100 ppm.

DETD Maltodextrin is preferably added to starch and forms a hydrocolloid surface upon the spray dried particles produced in accordance with the present invention. Maltodextrin is well known in the **food** industry, and reference may be made to U.S. Pat. Nos. 5,039,540; 5,260,304; 5,428,150; and 5,431,951 for maltodextrin processing.

PI US 6045823 20000404

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L8 ANSWER 1 OF 12 EUROPATFULL COPYRIGHT 2001 WILA
DETDEN. . . Experimental Pharmacology", A.S. Milton, Ed., Vol. 60, pp. 437-478, Springer, Berlin, 1982. Other well known compounds of this class are **Piperine**, the active ingredient in **black pepper** (**Piper nigrum** L.), see Cazeneuve et al., Bull. Soc. Chim. France. 1877, 27, 291, and **Gingerol**, the active ingredient in ginger (Zingiber officinale R.).
The effect is somewhat similar to those elicited by capsaicin and other capsaicinoids derived from hot peppers, by **piperine** derived from **black pepper**, by gingerols derived from ginger and by isothiocyanates derived from mustard. However, all the latter compounds impart usually long-lasting sensations. . .
Thus, . . . do not suffer the serious disadvantage of lingering hotness and other negative effects characteristic of existing food ingredients like capsaicin, **gingerol** and **piperine**.
After . . . a short time (individually from a few seconds to about half a minute). In contrast to compounds such as capsaicin, **piperine** and **gingerol** no lingering of the hot/warming, spicy and pungent sensation was observed.
Toothpaste base (Opaque 13/02-5F) was flavored with **peppermint** flavor (Givaudan Roure **peppermint** flavor 10570-34) at 0.5% by weight. The toothpaste base was blended separately with 100 ppm of each of the compounds. . .

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

| | |
|---|---|
| ACCESSION NUMBER: | 933030 EUROPATFULL EW 199931 FS OS |
| TITLE: | Pungent flavor components.<br>Komponenten von scharfem Geschmack.<br>Composants d'arome piquant. |
| INVENTOR(S): | Bachmann, Jean-Pierre, 4 Holzmoosruetisteig, 8820 Waedenswil, CH;<br>Gautschi, Markus, 27 Am Stutz, 4314 Zeiningen, CH;<br>Hostettler, Bernhard, 11 Obere Geerenstrasse, 8044 Gockhausen, CH;<br>Yang, Xiaogen, 7507 Secret Creek Court, West Chester, OH 45069, US |
| PATENT ASSIGNEE(S): | GIVAUDAN-ROURE (INTERNATIONAL) S.A., 1214 Vernier, Geneve, CH |
| PATENT ASSIGNEE NO: | 273262 |
| AGENT: | Buntz, Gerhard et al, Postfach 3255, 4002 Basel, CH |
| AGENT NUMBER: | 24913 |
| OTHER SOURCE: | ESP1999055 EP 0933030 A2 990804 |
| SOURCE: | Wila-EPZ-1999-H31-T3a |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | Anmeldung in Englisch; Veroeffentlichung in Englisch |
| DESIGNATED STATES: | R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE |
| PATENT INFO.PUB.TYPE: | EPA2 EUROPAEISCHE PATENTANMELDUNG |

PATENT INFORMATION:

| PATENT NO | KIND | DATE |
|---|---|---|
| EP 933030 | A2 | 19990804 |
| 'OFFENLEGUNGS' DATE: | | 19990804 |
| APPLICATION INFO.: EP 1998-123492 | | 19981214 |
| PRIORITY APPLN. INFO.: EP 1997-122633 | | 19971222 |

L8 ANSWER 2 OF 12 EUROPATFULL COPYRIGHT 2001 WILA
DETDEN Examples of the pungent component include substances obtained by extracting cayenne peppers (red, black and yellow ones), pepper, **Japanese pepper**, horseradish, onion, Japanese white radish, Welsh onion, garlic, ginger, etc. Particular examples thereof

include capsaicin originating in cayenne pepper, **piperine** and chavicin originating in pepper, .alpha.- and .beta.-sanshools and **spilanthol** originating in **Japanese pepper**, allyl mustard oil originating in Japanese white radish, black mustard and **Japanese pepper**, sinalbin mustard oil originating in white mustard, crotonyl mustard oil originating in rapeseed, phenylethyl mustard oil originating in nasturtium officinal and reseda odorata L, benzyl mustard oil originating in **piper nigrum** L, diallyl sulfide originating in Welsh onion and garlic, propylallyl disulfide originating in onion and garlic, diallyl sulfide originating in onion, dipropyl disulfide originating in onion, diallyl trisulfide originating in garlic, zingerone and syogaol originating in ginger, **gingerol** originating in ginger producted in Africa. Moreover, use can be made of pungent components comprising the above-mentioned components which have. . .

Examples . . . foods inherently containing these pungent components include solid spices, i.e., ground dry matters, (for example, mustard powder, Japanese horseradish powder, **Japanese pepper** powder and pepper), pasty spices (for example, mustard paste, Japanese horseradish paste, ginger paste, garlic paste), and composed spices [for. . .

It . . . pungent components contained in the foods tasting pungent as described above are those selected from a group consisting of capsaicin, **piperine**, allyl mustard oil, .alpha.- and .beta.-sanshools and syogaol.

Examples of the bitter component include surfactants (for example, sodium alkylsulfate, sodium monoalkylphosphate), flavors (for example, **menthol**, linalol, phenylethyl alcohol, ethyl propionate, geraniol, linalyl acetate, benzyl acetate), bactericides (for example, methylparaben, propylparaben, butylparaben), humectants (for example, lactic. . .

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

| | |
|---|---|
| ACCESSION NUMBER: | 750849 EUROPATFULL EW 199701 FS OS |
| TITLE: | Taste modifier.<br>Geschmacksveraenderungsmittel.<br>Modificateur du gout. |
| INVENTOR(S): | Katsuragi, Yoshihisa, c/o Kao Corp., Res. Lab., 20, Higashi-fukashiba, Kamisu-machi, Kashima-gun, Ibaragi, JP;<br>Umeda, Tomoshige, c/o Kao Corp., Res. Lab., 20, Higashi-fukashiba, Kamisu-machi, Kashima-gun, Ibaragi, JP |
| PATENT ASSIGNEE(S): | KAO CORPORATION, 14-10, Nihonbashi, Kayabacho 1-chome, Chuo-ku, Tokyo, JP |
| PATENT ASSIGNEE NO: | 218907 |
| AGENT: | Kraus, Walter, Dr. et al, Patentanwaelte Kraus, Weisert & Partner Thomas-Wimmer-Ring 15, 80539 Muenchen, DE |
| AGENT NUMBER: | 7061 |
| OTHER SOURCE: | ESP1997001 EP 0750849 A1 970102 |
| SOURCE: | Wila-EPZ-1997-H01-T3a |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | Anmeldung in Englisch; Veroeffentlichung in Englisch |
| DESIGNATED STATES: | R CH; R DE; R FR; R GB; R LI |
| PATENT INFO.PUB.TYPE: | EPA1 EUROPAEISCHE PATENTANMELDUNG |
| PATENT INFORMATION: | |

| PATENT NO | KIND | DATE |
|---|---|---|
| EP 750849 | A1 | 19970102 |
| 'OFFENLEGUNGS' DATE: | | 19970102 |
| APPLICATION INFO.: EP 1996-108448 | | 19960528 |
| PRIORITY APPLN. INFO.: JP 1995-139258 | | 19950606 |

L8 ANSWER 3 OF 12 EUROPATFULL COPYRIGHT 2001 WILA

ABEN The combination of pepper-like constituents, such as **piperine**, and volatile formate esters, such as ethyl formate, is useful as a substitute for chloroform in pharmaceutical, oral hygiene and. . .

DETDEN. . . to about 99.5% by weight of volatile formate ester(s). The pepper-like constituents are preferably selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaiacin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract and mixtures thereof. The volatile formate esters are preferably C.sub1.-C.sub4. alkyl formate esters, such as ethyl formate,. . .

U.S. . . . described as being suitable for use with a large number of flavoring adjuvants, such as, inter alia, ethyl formate or **piperine**. The .min.687 patent does not disclose flavoring compositions which are useful as a substitute for chloroform.

U.S. . . . food ad medicinal products. These oxabicyclooctane derivatives augment or enhance eucalyptus, herbaceous, blueberry-like, piney, lime-like, clove, banana-like, woody, oriental-like, spicy, **black pepper** and floral flavor characteristics with stringent, biting and bitter effects. These oxabicyclooctane derivatives are useful with a large variety of flavoring adjuvants, such as ethyl formate or **piperine**. The .min.100 patent does not disclose flavoring compositions which are useful as a substitute for chloroform.

U.S. . . . of cyclic acetals of 2-methyl-2-pentenal in foodstuffs, chewing gums, toothpastes or medicinal products to produce sweet, fruity, goose berry, green, **spearmint**-like, aniseed, licorice, floral and herbal flavor characteristics. These may also be used with a large variety of flavorants, such as ethyl formate, **piperine** and many others. The .min.393 patent does not teach or suggest flavoring compositions which are useful as a replacement for. . .

U.S. . . . flavors and fragrances of various consumable materials. A large variety of other flavorants may be included such as ethyl formate, **piperine** and many others. However, the .min.205 patent does not disclose or suggest flavoring compositions which are useful as a chloroform. . .

U.S. . . . augmenting or enhancing a variety of flavors and fragrances to various consumable materials. Other flavorants useful therewith include ethyl formate, **piperine** and many others. Flavorings as a substitute for chloroform are not disclosed or suggested by the .min.137 patent.

The . . . and biting taste characteristics similar to that of pepper. Preferably the pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaiacin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixtures thereof. The most preferred pepper-like constituent for use in this invention is **piperine**.

**Piperine** is a known flavorant which has the chemical name 1-[5-(1,3-benzodioxol-5-yl)-1-oxo-2,4-pentadienyl] piperidine. It can be represented by the following chemical formula: <image> **Piperine** is generally isolated from **black pepper** through an extraction process.

In . . . A preferred composition of this invention comprises by weight from about 0.1% to about 0.7% of the pepper-like constituent(s), preferably **piperine**, from about 20% to about 99.4% of the volatile formate ester(s), preferably ethyl formate, as well as solvents, for example. . . 42% glycerine and from about 0% to about 65% ethyl alcohol. A more preferred embodiment comprises by weight

about 0.62% **piperine** and about 99.38% ethyl formate. Another more preferred embodiment comprises by weight about 0.22% **piperine**, about 35.6% ethyl formate and about 64.18% ethyl alcohol. The most preferred embodiment comprises by weight about 0.13% **piperine**, about 20.77% ethyl formate, about 41.65% glycerin and about 37.45% ethyl alcohol.

Pharmaceutical . . . parts citric acid, about 27 parts ammonium chloride, about 201 parts sucrose, about 2.8 parts diphenhydramine hydrochloride, about 0.22 parts **menthol**, about 52.4 parts ethyl alcohol, about 8.1 parts flavoring and about 25 parts of said chloroform substitute flavoring composition.

Whereas . . . orally-consumable chloroform substitute.

2. A composition of 1 wherein said pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaicin, capsicum extract, capsium oleoresin, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixture thereof.

3. A composition of 1 wherein said pepper-like constituent is **piperine**.

4. A composition of 1 wherein said volatile formate esters are selected from the group consisting of ethyl formate,. . . formate ester is ethyl formate.

6. A composition of 1 comprising by weight from about 0.1% to about 0.7% **piperine**, from about 20% to about 99.4% ethyl formate, from about 0% to about 42% glycerine and from about 0% to about 65% ethyl alcohol.

7. A composition of 6 comprising by weight about 0.13% **piperine**, about 20.77% ethyl formate, about 41.65% glycerin and about 37.45% ethyl alcohol.

8. A composition of 6 comprising by weight about 0.62% **piperine** and about 99.38% ethyl formate.

9. A composition of 6 comprising by weight about 0.22% **piperine**, about 35.6% ethyl formate and about 64.18% ethyl alcohol.

10. A pharmaceutical composition comprising from about 0.05% to about. . . parts citric acid, about 27 parts ammonium chloride, about 2.1 parts sucrose, about 2.8 parts diphenhydramine hydrochloride, about 0.22 parts **menthol**, about 52.4 parts ethyl alcohol, about 8.1 parts flavoring and about 25 parts of said chloroform substitute flavoring composition.

. . . volatile formate ester(s).

20. The method of 19 wherein said pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaicin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixtures thereof.

21. The method of 19 wherein said pepper-like constituent is **piperine**.

22. The method of 19 wherein said volatile formate esters are selected from the group consisting of ethyl formate,. . .

CLMEN 2. A composition of claim 1 wherein said pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaicin, capsicum extract, capsium oleoresin, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixture thereof, preferably wherein said pepper-like constituent is **piperine**.

4. A composition according to anyone of the claims 1 to 3 comprising by weight from about 0.1% to about 0.7% **piperine**, from about 20% to about 99.4% ethyl formate, from about 0% to about 42% glycerine and from about 0% to about 65% ethyl alcohol, preferably comprising by weight about 0.13% **piperine**, about 20.77% ethyl formate,

about 41.65% glycerin and about 37.45% ethyl alcohol, preferably comprising by weight about 0.62% **piperine** and about 99.38% ethyl formate.

7. . . . parts citric acid, about 27 parts ammonium chloride, about 2.1 parts sucrose, about 2.8 parts diphenhydramine hydrochloride, about 0.22 parts **menthol**, about 52.4 parts ethyl alcohol, about 8.1 parts flavoring and about 25 parts of said chloroform substitute flavoring composition.

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

| | |
|---|---|
| ACCESSION NUMBER: | 452273 EUROPATFULL EW 199142 FS OS STA B |
| TITLE: | Combination of formate esters and pepper-like constituents as an orally-consumable chloroform substitute.<br>Mischung von Ameisensaeureestern und pfefferartigen Bestandteilen als ein oral konsumierbares Chloroform-Ersatzmittel.<br>Association d'esters formiques et constituants de type poivre comme un succedane du chloroforme consumable par voie orale. |
| INVENTOR(S): | Hussein, Mamoun M., 115 Boulevard, Mountain Lakes, New Jersey 07046, US;<br>Barcelon, Shirley A., 44 Center Grove Road K53, Randolph, New Jersey 07869, US;<br>Lynch, Donald M., 19 Fieldstone Place, Flemington, New Jersey 08822, US |
| PATENT ASSIGNEE(S): | WARNER-LAMBERT COMPANY, 201 Tabor Road, Morris Plains New Jersey 07950, US |
| PATENT ASSIGNEE NO: | 228290 |
| AGENT: | Silbiger, Jakob, Dr., c/o CAPSUGEL AG Fabrikmattenweg 2-4, CH-4144 Arlesheim, CH |
| AGENT NUMBER: | 26891 |
| OTHER SOURCE: | ESP1991077 EP 0452273 A1 911016 |
| SOURCE: | Wila-EPZ-1991-H42-T1 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | Anmeldung in Englisch; Veroeffentlichung in Englisch |
| DESIGNATED STATES: | R BE; R DE; R DK; R ES; R FR; R GB; R GR; R IT |
| PATENT INFO.PUB.TYPE: | EPA1 EUROPAEISCHE PATENTANMELDUNG |

PATENT INFORMATION:

| PATENT NO | KIND | DATE |
|---|---|---|
| EP 452273 | A1 | 19911016 |
| 'OFFENLEGUNGS' DATE: | | 19911016 |
| APPLICATION INFO.: EP 1991-810255 | | 19910408 |
| PRIORITY APPLN. INFO.: US 1990-508758 | | 19900412 |

L8 . . . the manufacturing process may utilize essential oils, synthetic flavors, or mixtures thereof including oils derived from plants and fruits, such as citrus oils, **peppermint** oil, **spearmint** oil, fruit essences, and the like.

CLM Oil Cinnamon Bark; Oil Clove Leaf; Freskomenthe (2-sec-Butylcyclohexanone; Linalool; Oleoresin **Capsicum; Oleoresin Black Pepper,** or any combination thereof.

. . . even vary depending on the location and climatic conditions where the plant was grown. This is especially true of Oleoresin Capsicum and Oleaoresin **Black Pepper**. The spice extracts may also contain other ingredients which

can reduce the effectiveness of the active ingredients, making it necessary to use larger. . .

In accordance with one embodiment of the present invention, the spice ingredient is added to a **mint** flavored chewing gum. The most widely utilized **mint** flavored chewing gums employ **peppermint** and **spearmint** as well as blends of the two. Typically, **peppermint** and **spearmint** flavors are added to chewing gum in the form of essential oils. Oil of **peppermint** is derived by distillation of the arial parts of the perennial herb Mentha piperita L. Oil of Cornmint, which is derived from Mentha arvensis L. var 12iperescens, can be blended with **peppermint** oil. Oil of **Spearmint** is derived from distillation of several species and varieties of the genus Mentha. The principle species and varieties are Mentha Spicata L.

and Mentha verticillata, and Mentha cardiac,. The **mint** flavoring agent is a blend of natural **peppermint** oils which A included at a level of between about 0.4 and about 3.0 percent of the chewing gum. Alternatively, the **mint** flavoring agent can be a blend of natural **spearmint** oils, or a blend including both natural **peppermint** oils and natural **spearmint** oils. Although it is preferred that the spice ingredients be added to **mint** flavored chewing gum, the present invention also contemplates the use of spice ingredients to extend the flavor duration of fruit flavored chewing. . .

. . .

chewing gum. However, it has been found that at this low level the spice ingredients contribute to the flavor duration of the **mint** flavored chewing gum.

As used in this specification and the appended claims, the term "**mint** flavored chewing gum" is intended to refer to a chewing gum which has a **mint** flavor as its dominant flavor.

. . .

be any ingredient, or combination thereof, from the group comprising: Oil Cinnamon Bark; Oil Clove Leaf; Freskomenthe (2-sec-Butylcyclo hexanone); Linalool; Oleoresin Capsicum; and Oleoresin **Black Pepper**.

. . .

in an amount between about 0.001 and about 0.02 percent. Finally, when the spice ingredient added to the chewing gum is Oleoresin **Black Pepper** it is preferred that it is added in an amount between 0.002 and about 0.05 percent.

According to a preferred embodiment of the present invention, the chewing gum includes a **mint** flavoring agent to give the gum a **mint** taste.

Typically, the overall **mint** flavoring agent content of the chewing gum will range from about 0.1 to about 10.0 weight percent and preferably from about 0.4. . .

The **mint** flavoring agents preferably comprise blends of natural **peppermint** oils and/or **spearmint** oils. Alternatively, the **mint** flavoring agents used in the invention can comprise blends which include

synthetic components, such as synthetic **menthol**, synthetic carvone, and the like. In the most preferred embodiment, the **mint** flavoring agent is a blend of natural **peppermint** oils added at about 0.9 percent by weight of the chewing gum.

Other, non-**mint** flavoring agents and adjuvants can also be added to the chewing gum of the present invention. For example, the flavor may comprise essential. . .

. . .

and artificial
flavoring agents may be combined in any sensorally
PC]r/US89/02137
WO 90/06689
acceptable blend. All such flavors and flavor blends which result in a **mint** or fruit flavored gum are contemplated by the present invention.

EXAMPLE
A **peppermint** control gum was made according to the ingredients in TABLE 1. The **peppermint** flavoring of the control gum consisted of a blend of
PCr/US89/02137
NWOO 90/06689
natural **peppermint** oils. Prior to the addition of the **peppermint** flavoring to the test gums, a spice ingredient was substituted for a specific percentage of flavoring and was preblended with the **peppermint** flavor. As another control, the same amount of spice T ingredient added to the **peppermint** test gums was added to a triacetin containing control gum to determine the characteristics of the spice ingredient itself.

TABLE 1
Gum Base 20.2%
Sucrose 54.40%
Dextrose Monohydrate 9.9%
Corn syrup 13.3%
Glycerin 1.3%
**Peppermint** flavor blend 0.97''
100 %
TABLE 2
Chewing Gum 1 2 3 4 5
**Peppermint** Control 1 5.52 4.95 3.17 1.90 1.32
3.5% Oil Cinnamon Banki 5.97 5.30 3.65 2.78 2.17
4.0% Clove Leaf Oil 1 5.60. . . Freskomenthe 1 5.35 4.37 3.28 2.67
2.10
4.0% Linalool 1 5.40 4.23 3.60 2.55 2.07
0.4% Oleoresin Capsicum 15.42 4.60 3.67 2.97 2.60
**Peppermint** Control 22 6.13 4.98 3.87 2.32 1.73
1% Oleorelin **Black**
**Pepper** 5.65 4.82 3.50 2.78 2.38
1 Usage levels given as % of flavor replaced
2 A second control was made for proper comparison as the 1% Oleoresin **Black Pepper** Chewing Gum was evaluated
at a different time and by different panelists.

As the above table indicates, the spice ingredients when used in **Peppermint** flavor chewing gum show no significant increase in flavor perception during the first three minutes of chewing. However, at minute 4 and especially at minute 5, the intensity of

flavor perceived is stronger in all of the spice ingredient containing **peppermint** gums than it is in the standard **peppermint** gum. Gum samples that were made with the spice/triacetin blend had very low flavor intensity at 1, 2, and 3 minutes and. . .

(a) Oil Cinnamon Bark;
(b) Oil Clove Leaf;
(c) Freskomenthe (2-sec-Butylcyclohexanone);
(d) Linalool;
(e) Oleoresin Capsicum; and
(f) Oleoresin **Black Pepper**.

7. The chewing gum of Claim I wherein the spice ingredient is Oleoresin **Black Pepper** present in an amount between about 0.002 and about 0.05 percent.

V The chewing gum of claim I wherein the flavoring agent is selected from the group consisting of natural **peppermint** oil, natural **spearmint** oil, and combinations thereof.

(a) Oil Cinnamon Bark;
(b) Oil Clove Leaf;
(c) Freskomenthe (2-sec-Butylcyclohexanone);
(d) Linalool;
(e) Oleoresin Capsicum; and
(f) Oleoresin **Black Pepper**, and
mixing said gum base, water soluble portion, flavoring agent, and spice ingredient until a homogenous mass is achieved.

is. The method of Claim 12 wherein the spice ingredient is Oleoresin **Black Pepper** present in an amount between about 0.002 and about 0.05 percent.

19. The method of Claim 12 wherein the flavoring agent is selected from the group consisting of natural **peppermint** oil, natural **spearmint** oil, and combinations thereof.

| | |
|---|---|
| ACCESSION NUMBER: | 1990006689 PCTFULL |
| TITLE (ENGLISH): | USE OF SPICE INGREDIENTS TO ENHANCE FLAVOR DURATION OF CHEWING GUM |
| TITLE (FRENCH): | UTILISATION D'INGREDIENTS AROMATIQUES POUR PROLONGER LA DUREE DU GOUT D'UN CHEWING-GUM |
| INVENTOR(S): | PATEL, Mansukh, M.; HSU, David, H. |
| PATENT ASSIGNEE(S): | WM. WRIGLEY JR. COMPANY; PATEL, Mansukh, M.; HSU, David, H. |
| LANGUAGE OF PUBL.: | English |
| DOCUMENT TYPE: | Patent |
| PATENT INFORMATION: | |

| NUMBER | KIND | DATE |
|---|---|---|
| WO 9006689 | A1 | 19900628 |

| | |
|---|---|
| DESIGNATED STATES: | AT AU BE CH DE FI FR GB IT JP LU NL NO SE US |
| APPLICATION INFO.: | WO 1989-US2137 19890517 |

L8 ANSWER 5 OF 12 USPATFULL
SUMM . . . Pharmacology", A. S. Milton, Ed., Vol. 60, pp. 437-478, Springer, Berlin, (1982). Other well known compounds of this class are **Piperine**, the active ingredient in **black**

**pepper** (**Piper nigrum** L.), see Cazeneuve et al., Bull. Soc. Chim. France. (1877), 27, 291, and **Gingerol**, the active ingredient in ginger (Zingiber officinale R.).

SUMM The effect is somewhat similar to those elicited by capsaicin and other capsaicinoids derived from hot peppers, by **piperine** derived from **black pepper**, by gingerols derived from ginger and by isothiocyanates derived from mustard. However, all of the latter compounds impart usually long-lasting. . .

SUMM . . . the serious disadvantage of lingering hotness nor do they exhibit other negative effects characteristic of lingering food ingredients like capsaicin, **gingerol** and **piperine**.

DETD . . . a short time (individually from a few seconds to about half a minute). In contrast to compounds such as capsaicin, **piperine** and **gingerol** no lingering of the hot/warming, spicy and pungent sensation was observed.

DETD Toothpaste base (Opaque 13/02-5F) was flavored with **peppermint** flavor (Givaudan Roure **peppermint** flavor 10570-34) at 0.5% by weight. The toothpaste base was blended separately with 100 ppm of each of the compounds. . .

ACCESSION NUMBER: 2001:40054 USPATFULL
TITLE: Flavorant compositions
INVENTOR(S): Bachmann, Jean-Pierre, Wadenswil, Switzerland
Gautschi, Markus, Zeiningen, Switzerland
Hostettler, Bernhard, Gockhausen, Switzerland
Yang, Xiaogen, West Chester, OH, United States
PATENT ASSIGNEE(S): Givaudn Roure (International) SA, Switzerland (non-U.S. corporation)

| | NUMBER | DATE | |
|---|---|---|---|
| PATENT INFORMATION: | US 6203839 | 20010320 | |
| APPLICATION INFO.: | US 1998-212985 | 19981216 | (9) |

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | EP 1997-122633 | 19971222 |

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Hendricks, Keith D.
LEGAL REPRESENTATIVE: Wood, Herron & Evans, L.L.P.
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
LINE COUNT: 641

L8 ANSWER 6 OF 12 USPATFULL

SUMM . . . coloring, or stabilizing agent, selected from the group consisting of char oil, onion oil, garlic oil, butter flavoring, cheese flavoring, **black pepper** oil, oleoresin cumin, oleoresin cardamon, oleoresin ginger, annatto extract, ascorbic acid, rosemary extract, sage extract, or another Labiatae natural antioxidant. . .

SUMM a method wherein a flavoring, coloring, or stabilizing agent, selected from the group consisting of **capsicum oleoresin**, paprika oleoresin, carrot oleoresin, chlorophyll, and phosphate, is included in the liquid composition; such

SUMM . . . or stabilizing agent (II) selected from the group consisting of char oil, onion oil, garlic oil, butter flavoring, cheese flavoring, **black pepper** oil, oleoresin cumin, oleoresin cardamon, oleo-resin ginger, annatto extract, ascorbic acid, rosemary extract, sage extract, or another Labiatae natural antioxidant. . .

SUMM . . . food substrate wherein the liquid composition contains a flavoring, coloring, or stabilizing agent (II) selected from the group consisting of **capsicum oleoresin**, paprika oleoresin, carrot oleoresin, chlorophyll, and phosphate; such

SUMM For example, flavoring agents such as char oil, onion oil, garlic oil,

butter flavoring, cheese flavoring, **black pepper** oil, oleoresin cardamon, oleoresin cumin, oleoresin ginger, other essential oils and the like, coloring agents such as annatto extract, FD&C. . .

SUMM Plus minor w/w percentages of one or more of the following: OR (oleoresin) **Black Pepper**, OR Ginger, OR Nutmeg, OR Clove, OR Capsicum, OR Cinnamon, Oil of **Black Pepper** , Aquaresin.RTM. Onion (OR or oil of onion in vegetable oil), Aquaresin.RTM. Garlic (OR or oil of garlic in vegetable oil).

SUMM . . . Oleoresin

| | | |
|---|---|---|
| | 7 | 50 |
| Paprika Oleoresin | | |
| | 10 | 35 |
| Carrot Oleoresin | | |
| | 10 | 15 |
| Aquaresin .RTM. Barbeque.sup.1 | | |
| | 1 | 500 |
| Aquaresin .RTM. Barbeque | | |
| | 10 | 0.5 to 2 |
| Annatto | 100 | 500 |
| **Black Pepper** | 10 | 300 |
| **Black Pepper** | 100 | 3.5 |
| **Capsicum oleoresin** (OR) | | |
| | 100 | 4 |
| **Capsicum oleoresin** (OR) | | |
| | 10 | 150 |
| Cardamom | 100 | 1 |
| Dill Oil | 10 | 500 |
| Dill Oil | 100 | 0.5 |
| Oil of **Black Pepper** | | |
| | 100 | 500 |
| Oil of Clove | 10 | 500 |
| Oil of Clove | 100 | 0.7 |
| Oil of Fennel | 100 | 70 |
| Oil of Garlic | 10 | 500 |
| Oil of Garlic | 100 | 1.5 |
| Oil of Nutmeg | 100 | 500 |
| Oil of **Spearmint** | | |
| | 100 | 0.2 |

---

.sup.1 Aquaresin .RTM. is a registered trademark of Kalsec, Inc.

SUMM . . . materials whose neat (concentration=100%) measured resistivities are above 500 megaohm-cm have no promise as resistivity modifiers. Other materials, such as **black pepper** and cardamon oleoresins, whose neat resistivities are fairly low (e.g. 3.5 megaohm-cm for **black pepper**) are not useful at reasonable concentrations. A ten percent solution of **black pepper** oleoresin in soy oil has a resistivity of 300 megaohm-cm and is near the upper limit for electrostatic atomization and. . .

DETD . . . concentration do not by themselves possess sufficient ability to adequately modify the base material resistivity on their own. For example, **black pepper** oil or oleoresin in soy oil can be electrostatically applied to a food substrate if an appropriate amount of oleoresin. . .

CLM What is claimed is:

8. A method of claim 3, wherein the flavoring agent is **capsicum oleoresin**; wherein the coloring agent is selected from the group consisting of paprika oleoresin, carrot oleoresin, and chlorophyll; and wherein the. . .

. . . additional flavoring agents are selected from the group consisting of char oil, onion oil, garlic oil, butter flavoring, cheese flavoring, **black pepper** oil, oleoresin cumin, oleoresin cardamon, and oleoresin ginger; coloring agents are selected from the group consisting of annatto extract, turmeric. . .

. . . . from: a flavoring agent selected from the group consisting of char oil, onion oil, garlic oil, butter flavoring, cheese flavoring, **black pepper** oil, oleoresin cumin, oleoresin cardamon, and oleoresin ginger; a coloring agent selected from the group consisting of annatto extract, turmeric. . .
25. A food substrate of claim 20 wherein the flavoring agent (IIa) is **capsicum oleoresin**; wherein the coloring agent (IIb) is selected from the group consisting of paprika oleoresin, carrot oleoresin, and chlorophyll; and wherein. . .

ACCESSION NUMBER: 2000:1569 USPATFULL
TITLE: Electrostatic deposition of edible liquid condiment compositions upon edible food substrates and thus-treated products
INVENTOR(S): Evans, Robert J., Kingport, TN, United States
Reynhout, Gregory S., Kalamazoo, MI, United States
PATENT ASSIGNEE(S): Kalamazoo Holdings, Inc., Kalamazoo, MI, United States (U.S. corporation)

| | NUMBER | DATE |
|---|---|---|
| PATENT INFORMATION: | US 6010726 | 20000104 |
| APPLICATION INFO.: | US 1995-458675 | 19950602 (8) |

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Tran, Lien
LEGAL REPRESENTATIVE: The Firm of Gordon W. Hueschen
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
LINE COUNT: 1567

L8 ANSWER 7 OF 12 USPATFULL
SUMM . . . the sensation of pain or even produce a loss of consciousness. In the seventeenth and eighteenth century, plants such as **peppermint** and camphor were used for the pain of skin lesions, cool moist clay was used to relieve sunburn pain, and. . .
DETD . . . (37). One of the motivations for his explorations was to find a new route to the Orient, the source of **black pepper**. The similarity of the oral irritation of **black pepper** and the chili peppers of the new world led to the name "pepper" for the chilis although they are not botanically related to the **black pepper**. Chili peppers are botanically related to the tomato, potato, tobacco, and nightshade. The consumption of chili peppers dates back to. . .
DETD . . . Desensitization to capsaicin reduces burn sensations from a variety of other irritants (e.g., ethanol, and the irritant compounds in ginger, **black pepper**, and cinnamon) but other irritants do not desensitize capsaicin (e.g., (88-90)). The **piperine** in **black pepper** is one exception; however, even though repeated application of **piperine** does desensitize capsaicin to some degree, capsaicin desensitizes **piperine** much more effectively ((72)).
DETD . . . the timing of the applications may vary with genetic status, sex, and the degree of mucositis. The effective amount of **capsacin** for effectivelly desensitizing a patient an be determined by known means and the effective amount of capsaicin level can be. . .
DETD 72. Green, B. G., Cross-sensitization and desensitization between capsaicin and **piperine**: Evidence of partial independence of sensory mechanisms. Chemical Senses, 1990. 15: p. 585-586.

ACCESSION NUMBER: 1998:91617 USPATFULL
TITLE: Method and composition for treating oral pain using capsaicin
INVENTOR(S): Nadoolman, Wolffe, 111 Park St., Apt. 15T, New Haven, CT, United States 06511

Bartoshuk, Linda M., 495 Ellsworth Ave., New Haven, CT, United States 06511

| | NUMBER | DATE |
|---|---|---|
| PATENT INFORMATION: | US 5788982 | 19980804 |
| APPLICATION INFO.: | US 1995-491083 | 19950616 (8) |
| DOCUMENT TYPE: | Utility | |
| PRIMARY EXAMINER: | Page, Thurman K. | |
| ASSISTANT EXAMINER: | Faulkner, D. | |
| LEGAL REPRESENTATIVE: | Burns, Doane, Swecker Mathis, LLP | |
| NUMBER OF CLAIMS: | 1 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 1021 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 12 USPATFULL

AB The combination of pepper-like constituents, such as **piperine**, and volatile formate esters, such as ethyl formate, is useful as a substitute for chloroform in pharmaceutical, oral hygiene and. . .

SUMM . . . to about 99.5% by weight of volatile formate ester(s). The pepper-like constituents are preferably selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaiacin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract and mixtures thereof. The volatile formate esters are preferably C.sub.1 -C.sub.4 alkyl formate esters, such as ethyl. . .

SUMM . . . described as being suitable for use with a large number of flavoring adjuvants, such as, inter alia, ethyl formate or **piperine**. The '687 patent does not disclose flavoring compositions which are useful as a substitute for chloroform.

SUMM . . . food ad medicinal products. These oxabicyclooctane derivatives augment or enhance eucalyptus, herbaceous, blueberry-like, piney, lime-like, clove, banana-like, woody, oriental-like, spicy, **black pepper** and floral flavor characteristics with stringent, biting and bitter effects. These oxabicyclooctane derivatives are useful with a large variety of flavoring adjuvants, such as ethyl formate or **piperine**. The '100 patent does not disclose flavoring compositions which are useful as a substitute for chloroform.

SUMM . . . of cyclic acetals of 2-methyl-2-pentenal in foodstuffs, chewing gums, toothpastes or medicinal products to produce sweet, fruity, goose berry, green, **spearmint**-like, aniseed, licorice, floral and herbal flavor characteristics. These may also be used with a large variety of flavorants, such as ethyl formate, **piperine** and many others. The '393 patent does not teach or suggest flavoring compositions which are useful as a replacement for. . .

SUMM . . . flavors and fragrances of various consumable materials. A large variety of other flavorants may be included such as ethyl formate, **piperine** and many others. However, the '205 patent does not disclose or suggest flavoring compositions which are useful as a chloroform. . .

SUMM . . . augmenting or enhancing a variety of flavors and fragrances to various consumable materials. Other flavorants useful therewith include ethyl formate, **piperine** and many others. Flavorings as a substitute for chloroform are not disclosed or suggested by the '137 patent.

DETD . . . and biting taste characteristics similar to that of pepper. Preferably the pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaiacin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixtures thereof. The most preferred pepper-like

constituent for use in this invention is **piperine**.

DETD **Piperine** is a known flavorant which has the chemical name 1-[5-(1,3-benzodioxol-5-yl)-1-oxo-2,4-pentadienyl]piperidine. It can be represented by the following chemical formula: ##STR1## **Piperine** is generally isolated from **black pepper** through an extraction process.

DETD . . . optional ingredients, such as sweeteners. A preferred composition of this invention comprises by weight from about 0.1% to about 0.7% **piperine**, from about 20% to about 99.4% ethyl formate, from about 0% to about 42% glycerine and from about 0% to about 65% ethyl alcohol. A more preferred embodiment comprises by weight about 0.62% **piperine** and about 99.38% ethyl formate. Another more preferred embodiment comprises by weight about 0.22% **piperine**, about 35.6% ethyl formate and about 64.18% ethyl alcohol. The most preferred embodiment comprises by weight about 0.13% **piperine**, about 20.77% ethyl formate, about 41.65% glycerin and about 37.45% ethyl alcohol.

DETD . . . parts citric acid, about 27 parts ammonium chloride, about 201 parts sucrose, about 2.8 parts diphenhydramine hydrochloride, about 0.22 parts **menthol**, about 52.4 parts ethyl alcohol, about 8.1 parts flavoring and about 25 parts of said chloroform substitute flavoring composition.

DETD TABLE I

| Ingredient: | Sample: A | B | C |
|---|---|---|---|
| Ethyl Formate | 20.77% | 99.38% | 35.6% |
| **Piperine** | 0.13% | 0.62% | 0.22% |
| Ethyl Alcohol | 37.45% | 0.0% | 64.18% |
| Glycerin | 41.65% | 0.0% | 0.0% |

DETD TABLE II

| Ingredient: | Sample: D | E | F | G(Control) |
|---|---|---|---|---|
| **Mint** Flavored Toothpaste | 99.25% | 99.89% | 99.55% | 99.33% |
| Flavoring Composition Sample A | 0.75% | -- | -- | -- |
| Flavoring Composition Sample B | -- | 0.11% | 0.045% | -- |
| Flavoring Composition Sample C | -- | -- | -- | 0.67% |

| | | |
|---|---|---|
| DETD . . . Saccharin | 3.00 | grams |
| Sodium Benzoate | 2.00 | grams |
| Liquid Glucose | 700.00 | grams |
| Glycerin | 39.30 | grams |
| Citric Acid | 2.20 | grams |
| Ammonium Chloride | 27.00 | grams |
| Sucrose | 201.00 | grams |
| Diphenhydramine Hydrochloride | 2.80 | grams |
| **Menthol** | 0.22 | grams |

Ethyl Alcohol (USP 95%)
52.40 ml.
Flavorants (Caramel/ 8.10 grams
Ponceau 4R/Raspberry)

---

CLM What is claimed is:
2. A composition of claim 1 wherein said pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaicin, capsicum extract, capsium oleoresin, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixture thereof.
3. A composition of claim 1 wherein said pepper-like constituent is **piperine**.

6. A composition of claim 1 comprising by weight from about 0.1% to about 0.7% **piperine**, from about 20% to about 99.4% ethyl formate, from about 0% to about 42% glycerine and from about 0% to. .
.
7. A composition of claim 6 comprising by weight about 0.13% **piperine**, about 20.77% ethyl formate, about 41.65% glycerin and about 37.45% ethyl alcohol.

8. A composition of claim 6 comprising by weight about 0.62% **piperine** and about 99.38% ethyl formate.

9. A composition of claim 6 comprising by weight about 0.22% **piperine**, about 35.6% ethyl formate and about 64.18% ethyl alcohol.

. . . parts citric acid, about 27 parts ammonium chloride, about 2.1 parts sucrose, about 2.8 parts diphenhydramine hydrochloride, about 0.22 parts **menthol**, about 52.4% parts ethyl alcohol, about 8.1 parts flavoring and about 25 parts of said chloroform substitute flavoring composition.

17. The method of claim 16 wherein said pepper-like constituents are selected from the group consisting of **piperine**, iso-**piperine**, **chavicine**, iso-**chavicine**, capsaicin, capsicum extract, **capsicum oleoresin**, zingerone, mustard oil, horseradish extract, **hot pepper oil**, hot pepper extract, and mixtures thereof.
18. The method of claim 16 wherein said pepper-like constituent is **piperine**.


| | | | |
|---|---|---|---|
| ACCESSION NUMBER: | 91:60626 USPATFULL | | |
| TITLE: | Combination of formate esters and pepper-like constituents as an orally-consumable chloroform substitute | | |
| INVENTOR(S): | Hussein, Mamoun M., Mountain Lakes, NJ, United States<br>Barcelon, Shirley A., Randolph, NJ, United States<br>Lynch, Donald M., Flemington, NJ, United States | | |
| PATENT ASSIGNEE(S): | Warner-Lambert Company, Morris Plains, NJ, United States (U.S. corporation) | | |
| | NUMBER | DATE | |
| PATENT INFORMATION: | US 5035882 | 19910730 | |
| APPLICATION INFO.: | US 1990-508758 | 19900412 | (7) |
| DOCUMENT TYPE: | Utility | | |
| PRIMARY EXAMINER: | Rose, Shep K. | | |
| LEGAL REPRESENTATIVE: | Battle, Carl W. | | |
| NUMBER OF CLAIMS: | 24 | | |

EXEMPLARY CLAIM: 1
LINE COUNT: 415
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 9 OF 12 USPATFULL

SUMM **Menthol** is isolated principally from the oil of Mentha arvensis. In its commercial form, **menthol** is present as crystals obtained from a process involving cooling of the above mentioned oil. Fractional distillation of **peppermint** oil which usually contains from about 50% to about 65% **menthol** provides another important source of **menthol**. In addition, **menthol** can be provided synthetically.

SUMM The use of **menthol**, for example, for its medicinal effect is known in the art. **Menthol**'s cooling effect to the mouth is useful to relieve local irritations in the throat and mouth.

SUMM Eucalyptus is another essential oil often combined with other essential oils such as **menthol** in confection formulations to impart medicinal effect. In particular, eucalyptus is believed to exhibit an expectorant action. The combination of the essential oils of **menthol** and eucalyptus, in a formulation capable of dissolving in the oral cavity provide a useful medicinal preparation in treatment of. . .

SUMM . . . from several shortcomings. For example, bitterness is often perceived due to the high potency of the essential oils which contain **menthol**. The bitterness of the **menthol** released in the oral cavity, therefore, provides an unpleasant organoleptic experience to the user thus reducing the likelihood of continued treatment with the lozenge or tablet. In addition, prior art preparations containing **menthol** suffer from reduced efficacy due to the erratic release of the **menthol** contained within the confection. Consequently, the cooling effect of **menthol** has often been attenuated. These problems, therefore, tend to detract from the acceptance of **menthol**-containing products as adjuncts in cough and cold therapy.

SUMM Other confectionery products, which may contain **menthol** or other flavorants derived from essential oils, such as **spearmint**, and/or **peppermint**, have also been known to produce bitterness while residing in the oral cavity.

SUMM . . . food preparations to impart a pungent taste. Capsicum generally refers to various types of pepper of varying degrees of pungency. **Capsicum oleoresin** is an extract of fruits from various capsicum species and consists of a resinous matter and a liquid phase. The **capsicum oleoresin** is extremely pungent. For example, a dilution of one part of **capsicum oleoresin** in five million parts of 9% sugar water at 10.degree. C. produces a distinct burning effect in the throat and posterior region of the oral cavity. The **capsicum oleoresin**, with its characteristic peppery odor and extremely high bite, provides a useful source of aromas and is useful as an. . .

SUMM . . . enhance the flavor and aroma of chewing gums, toothpaste and medicinal products containing various flavor adjuvants including capsicum and other **black pepper** oleoresins as well as numerous volatile oils.

SUMM . . . volatile oils and other sweeteners to provide the desired flavor in the oral cavity. Examples of suitable volatile oils include **spearmint**, eucalyptus, **peppermint**, **menthol** and wintergreen (methyl salicyclate) oils. Additionally, the confections of the present invention can also include sweeteners such as sugar, sugar. . .

SUMM In one embodiment, there is provided a confection containing a blend of eucalyptus and 1-**menthol** and the modifying agent to ameliorate the perceived bitterness of the volatile oil combination. The above-mentioned combination is useful in. . .

SUMM In a preferred embodiment, the confection contains both **menthol**

and eucalyptus as the volatile oil component and the volatile oil modifying agent is **capsicum oleoresin** present in an amount of from about 1 to about 30 ppm. In this embodiment, the confection confers medicinal benefits. . .

SUMM . . . oleoresins or extracts derived from plants, leaves, flowers, fruits, stems and combinations thereof. Non-limiting representative examples of volatile oils include **spearmint** oil, cinnamon oil, oil of wintergreen (methyl saliclate), **peppermint** oil, **menthol**, clove oil, bay oil, anise oil, eucalyptus oil, thyme oil, cedar leaf oil, oil of nutmeg, allspice oil, oil of. . .

SUMM In addition, the confection may also contain suitable auxiliary flavorings including both natural and artificial flavors, and mints such as **peppermint**, artificial vanilla, cinnamon, various fruit flavors, both individual and mixed. Such flavorings are generally utilized in amounts that will vary. . .

SUMM The volatile oil-modifying agent is preferably **capsicum oleoresin**. To effect the novel volatile oil enhancing properties of the present invention the modifying agent is present in an amount. .

.

SUMM **Capsicum oleoresin** is a dark red or orange-red liquid obtained by solvent extraction of a dried ripe fruit of Capsicum frutescens or Capsicum annuum. The **capsicum oleoresin** has a characteristic odor and extremely high bite. For example, usually within the range of 250,000 to 1,000,000 Scoville heat units. **Capsicum oleoresin** also has a distinct burning effect in the throat and posterior portion of the mouth.

SUMM Although capsicum and **capsicum oleoresin** are considered to be potent sources of peppery or pungent flavor, it has now been found that they enhance flavor. . .

SUMM As previously mentioned, the volatile oil component of the confection may include **menthol**. In particular, the most important commercial source is 1-**menthol**. Commercial 1-**menthol** is isolated principally from the oil of Mentha arvensis. The process involves cooling of the oil and purifying the crystals formed. **Menthol** possess a distinct **peppermint** flavor and gives the impression of cooling the mouth and skin.

SUMM L-**menthol** and eucalyptus oil may be combined to provide the volatile oil component of the confection. When so combined, the **menthol**-eucalyptus is useful as an adjunct to coughing cold therapy. Eucalyptus is believed to impart decongestant type activity while **menthol** provides soothing of the mouth and throat areas. When the volatile oil modifying agent capsicum is combined with the above volatile oil combination **menthol**-eucalyptus, it has been found that the modifying agent substantially ameliorates the unpleasant organoleptic experience often detected when confectionery formulations containing. . .

DETD

CONTROL SAMPLES

| | PERCENT BY WEIGHT | |
|---|---|---|
| INGREDIENT | A | B |
| Sugar (fine granulated) | 54.7830 | 54.8185 |
| Corn syrup 43 Baume | 44.8210 | 44.8515 |
| Citric acid | 0.2160 | -- |
| 1-**menthol** | 0.1000 | 0.1733 |
| Eucalyptus oil | 0.0800 | 0.1567 |
| **Capsicum Oleoresin** | -- | -- |
| | 100.000 | 100.000 |

DETD Additionally, the inventive confections with the volatile oil modifying agent **capsicum oleoresin** were prepared in accordance

with the following formula.

DETD

INVENTIVE SAMPLES

| INGREDIENT | PERCENT BY WEIGHT SAMPLE C | SAMPLE D |
|---|---|---|
| Sugar-fine granulated | 54.7820 | 54.8190 |
| Corn syrup 43 Baume | 44.8210 | 44.8510 |
| Citric acid | 0.2160 | -- |
| 1-**menthol** | 0.1000 | 0.1711 |
| Eucalyptus oil | 0.0800 | 0.1546 |
| **Capsicum Oleoresin** | 0.0010 | 0.0043 |
| | 00.0000 | 100.0000 |

DETD Control Samples A and B were described as having a harsh flavor with a strong **menthol** presence and associated bitterness. Inventive Sample C and D, on the other hand, were described as having significantly less bitterness and an organoleptically pleasing **menthol**-eucalyptus flavor with more enhanced **menthol** cooling than the Controls.

DETD . . . products of the present invention provided favorable results when compared to the control samples. Whereas in the past, confections containing **menthol** and/or eucalyptus often provided undesired organoleptic sensations such as bitterness, the inventive compositions clearly demonstrate decreased bitterness upon the release. . . .

CLM What is claimed is:

2. The confection of claim 1 wherein said **capsicum oleoresin** is present in an amount of from about 5 to about 80 ppm in said confection.

3. The confection of claim 2 wherein said **capsicum oleoresin** is present in an amount of from about 9 to about 50 ppm in said confection tablet.

4. The confection of claim 1 wherein said volatile oils are selected from the group consisting of **menthol**, 1-**menthol**, anise, caraway, cinnamon, clove, coriander, eucalyptus, fennel, lavender, lemon, orange, orange flower, **peppermint**, pine needle, **spearmint**, and mixtures thereof.

9. The method of claim 8 wherein said volatile oils are selected from the group consisting of **menthol**, 1-**menthol**, anise, caraway, cinnamon, clove, coriander, eucalyptus, fennel, lavender, lemon, orange, orange flower, **peppermint**, pine needle, **spearmint**, and mixtures thereof.

10. A medicinal tablet for dissolving in the oral cavity comprising: (a) **menthol**; and (b) a **menthol** modifying agent in an amount which is sensorially undetected in the oral cavity but sufficient to modify sensory perception of said **menthol** as it is released from said medicinal tablet in the oral cavity.

ACCESSION NUMBER: 90:98520 USPATFULL
TITLE: Flavor enhancing and increasing efficacy of cough drops
INVENTOR(S): Oppenheimer, Alfred, Randolph, NJ, United States
Cifrese, Ralph, Wharton, NJ, United States
Hussein, Mamoun M., Mt. Lakes, NJ, United States
Corsello, Vincent, Cedar Knolls, NJ, United States
PATENT ASSIGNEE(S): Warner-Lambert Company, Morris Plains, NJ, United States (U.S. corporation)

| | NUMBER | DATE | |
|---|---|---|---|
| PATENT INFORMATION: | US 4980169 | 19901225 | |
| APPLICATION INFO.: | US 1990-518360 | 19900503 | (7) |

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Phelan, D. Gabrielle
LEGAL REPRESENTATIVE: Scola, Jr., Daniel A.
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 507

L8 ANSWER 10 OF 12 USPATFULL
SUMM . . . Furaneol
Cis-3-Hexenol Garlic Oleoresin
Fennugreek Absolute
Garlic Extract
Dimethyl Sulfide Green cognac oil
Ethyl maltol Pyridine
Methional Onion Oil & Oleoresin
2-Acetyl Pyrazine Onion extract
Tetramethyl Pyrazine
**Black Pepper** Oleoresin
D'Limonene Sage Oil & Oleoresin
Methyl Sulfide Nutmeg Oil & Oleoresin
Furfural Nutmeg Oil
2,5-Dimethyl Pyrazine
Cunin Oil
Wintergreen Oil Lemon Oils
Trimethyl Pyrazine
Lime Oils
Star Anise Oil Oil Lime Distilled
Thyme Oleoresin Methoxy Pyrazine
Marjoram Oleoresin
Jasmine Extract
Oreganum Oil Orange & Tangerine Oils
Oreganum Oleoresin
**Menthol**
Bay Oleoresin & Oil
**Peppermint** Oils
Coriander Oil & Oleoresin
Pimenta Oleoresin
Clove Oil & Oleoresin
Guaiacol
Cassia Oil
Rosemary Oleoresin & Oil
Oleoresin **Capsicum**
**Oleoresin** Ginger
Celery Oleoresin
Lipolyzed butter oil
(e.g. "Dariteen L-95")

DETD

| Ingredient | Parts |
|---|---|
| MSG | 2.0 |
| Ribotide | 0.5 |
| Soft Garlic Ext. | 0.3 |
| **Black Pepper** Oleoresin | 1.5 |
| Soft Onion Ext. | 0.4 |
| Oregano Oleoresin | 5.0 |
| Tomato Conc. | 70.0 |

| | |
|---|---|
| Diacetyl | 3.0 |
| Water | 18.0 |

DETD

| Ingredients | Parts |
|---|---|
| Enzyme Modified Cheddar Cheese | 25 |
| Enyzme Modified Parmesan Cheese | 25 |
| Oleoresin **Black Pepper** | 5 |
| Oleoresin Capsicum (250,000 units) | 3 |
| Diacetyl | 10 |
| Ungerer Artificial Cheddar Cheese 14674 | 15 |
| Propylene Glycol | 17 |

DETD

| Component | % by wt. |
|---|---|
| Water | 63.8 |
| Sodium Chloride | 18.0 |
| Color (Anthocyanins) | 0.2 |
| Pizza Flavor | 14.0 |
| Ingredient | Parts |
| MSG | 2.0 |
| Ribotide | 0.5 |
| Soft Garlic Ext. | 0.3 |
| **Black Pepper** Oleoresin | 1.5 |
| Soft Onion Ext. | 0.4 |
| Oregano Oleoresin | 5.0 |
| Tomato Conc. | 70.0 |
| Diacetyl | 3.0 |
| Water | 18.0 |

DETD . . . wt.

| | |
|---|---|
| Water | 46.0 |
| Sodium Chloride | 18.0 |
| Extra Sharp Cheddar Cheese | 23.0 |
| Enzyme Modified Cheese Conc. | 7.0 |
| Compounded Butter Flavor | 2.0 |
| Antifunal Component | 4.0 |
| Compounded as Ingredients | Parts |
| Oleoresin **Black Pepper** | 20 |
| Rosemary Ext. | 70 |
| Cinnamic Aldehyde | 2 |
| Cumin Oil Ext. | 5 |
| Basil Oil Ext. | 3 |

| | |
|---|---|
| ACCESSION NUMBER: | 87:8004 USPATFULL |
| TITLE: | Internally flavored hulled cereal grain and process for preparation |
| INVENTOR(S): | May, William A., 5 House Wren, Hackettstown, NJ, United States 07840 |

| NUMBER | DATE |
|---|---|

PATENT INFORMATION: US 4640842 19870203
APPLICATION INFO.: US 1985-764711 19850813 (6)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1985-697204, filed on 1 Feb 1985 which is a continuation-in-part of Ser. No. US 1983-547131, filed on 31 Oct 1983, now abandoned And a continuation-in-part of Ser. No. US 1984-577342, filed on 6 Feb 1984, now abandoned And a continuation-in-part of Ser. No. US 1984-605466, filed on 30 Apr 1984, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Jones, Raymond N.
ASSISTANT EXAMINER: Cintins, Marianne M.
LEGAL REPRESENTATIVE: Klooster, John W.
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
LINE COUNT: 1948

L8 ANSWER 11 OF 12 USPATFULL

SUMM . . . parts other than the fruit itself being preferred. Further, the term includes natural derivatives of such essential oils such as **menthol**, anethol, eucalyptol, carvone, eugenol, isoeugenol, terpenols, terpenes, terpinenes, and terpinones as well as synthetic materials similar to the natural materials and derivatives such as synthetic clove, cinnamic aldehyde, synthetic **menthol** and methyl salicylate. Typical essential oils are **peppermint** oil, **spearmint** oil, clove oil, sassafras oil, aniseed oil, cinnamon oil (including oil of cinnamon leaf and of cinnamon bark), eucalyptus oil,. . . oil, rose oil, geranium oil and thyme oil. Mixtures may be used. A preferred essential oil is a mixture of **menthol**, anethol and eucalyptus oil, typically in amounts of about 35-45% by weight of **menthol**, about 20-30% by weight of anethol and about 30-40% by weight of eucalyptus oil.

SUMM Typical oleoresins which provide high sensation are of the capsicum variety type from dried ripe fruits including **capsicum oleoresin**, and red pepper oleoresin. The specific **capsicum oleoresin** is obtained by solvent extraction from the dried ripe fruit of capsicum frutescens L. (chiles) or capsicum annum L. (Spanish. . .

SUMM **Black pepper** oleoresin is also a suitable high sensation material. It is obtained by solvent extraction from dried unripe berries (**piper nigrum**) followed by removal of solvent (See Fenaroli's Handbook, supra pages 432-433). Other oleoresins such as cubeb oleoresins, and cumin oleoresin. . .

SUMM It is noteworthy that **capsicum oleoresin** has been reported as having been used in chewing gum in amount of 46 ppm, that is 0.0046% (Fenaroli's Handbook, supra, pages 305-306). Such chewing gum would be expected to contain additional flavouring agent since the flavour tone of **capsicum oleoresin** is too pungent to be desirable as a sole flavouring ingredient in a chewing gum. However, the high sensation effect of the **capsicum oleoresin** from a chewing gum, particularly after removal of the chewing gum from the mouth would be substantially less than in. . . since the mastication of the gum is intended to continue while the flavour is present. Thus, substantial removal of the **capsicum oleoresin** from a chewing gum would occur before the chewing gum is removed from the mouth. In an aqueous oral composition such as a dental cream or a mouthwash the note from the **capsicum oleoresin** is optimized by its exercising its high sensation effect well after removal of the dental cream from the oral cavity.

SUMM . . . used. Ginger is also disclosed as a toothpaste additive in British Pat. No. 1,438,205 in amount of 0.2%, with 1% **menthol** also being present. This level of ginger and the 5:1 ratio of **menthol** as essential oil to ginger, would provide a product too pungent for commercial use if ginger oleoresin had been used.

DETD 0.01 part of **capsicum oleoresin** was dissolved in 1 part of an essential oil containing about two-fifths **menthol**, about one-quarter anethol and about one-third eucalyptus oil. The 1.01 parts of flavour composition thereby formed was dispersed in a. . .

DETD When this dental cream was dispersed in the mouth during toothbrushing the flavour of the **menthol**-anethol-eucalyptus oil was initially felt. By the time the dental cream was rinsed from the mouth, the first flavour tone was supplemented by the high sensation separate flavour tone of **capsicum oleoresin** which remained well after removal of the dental cream from the mouth.

DETD . . . experienced after rinsing the oral cavity free of dental cream when 0.005 (Example 2), and 0.05 parts (Example 3) of **capsicum oleoresin** were employed in the dental cream with minor adjustment in the amount of water.

DETD . . . tone was experienced after rinsing the oral cavity free of dental cream when ginger oleoresin is used in place of **capsicum oleoresin** in the dental cream of Example 1.

DETD A further high sensation flavour tone was experienced after rinsing the oral cavity free of dental cream when **black pepper** oleoresin was used in place of **capsicum oleoresin** in the dental cream of Example 1.

DETD . . . PARTS

| COMPONENTS | A | B | C |
|---|---|---|---|
| Ethanol (95%) | 6.000 | 6.000 | 6.000 |
| Benzethonium chloride | 0.082 | -- | -- |
| Glycerine | 10.130 | 10.130 | 10.130 |
| Essential oil of Example 1 | 0.218 | 0.218 | 0.218 |
| **Capsicum oleoresin** | 0.075 | 0.075 | 0.010 |
| Sorbitan monstearate condensate with 20 moles of polyethylene oxide | 2.000 | 2.000 | 2.000 |
| Water | 81.371 | 81.453 | 81.518 |
| Red colour (1% solution) | 0.100 | 0.100 | 0.100 |

CLM What is claimed is:

. . . 2. The aqueous oral composition as claimed in claim 1 in which the essential oil contains at least one of **menthol**, anethol and eucalyptus oil.

. . . The aqueous oral composition as claimed in claim 1 in which the oleoresin is selected from the group consisting of **capsicum oleoresin**, red pepper oleoresin, ginger oleoresin and **black pepper** oleoresin.

4. The aqueous oral composition as claimed in claim 3 in which the oleoresin is **capsicum oleoresin**.


ACCESSION NUMBER: 83:61523 USPATFULL
TITLE: Flavored aqueous oral composition
INVENTOR(S): Hayes, Harry, Warrington, England
Ahmed, Munir A., Firswood, England
PATENT ASSIGNEE(S): Colgate-Palmolive Company, New York, NY, United States (U.S. corporation)

| | NUMBER | DATE |
|---|---|---|
| PATENT INFORMATION: | US 4423030 | 19831227 |

APPLICATION INFO.: US 1982-375783 19820506 (6)

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | GB 1981-14566 | 19810513 |

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Rose, Shep K.
LEGAL REPRESENTATIVE: Stone, Robert L.; Grill, Murray M.; Sylvester, Herbert S.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 397
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 12 OF 12 USPATFULL

SUMM . . . stabilized anhydrous essential-oil extract from the original spice or other vegetable material, such as garlic or cloves or nutmeg or **peppermint** or **black pepper** or turmeric, and so on through the long list of spices and other flavors, which had previously been prepared in. . .

DETD . . . them and they are limited for the present purpose only by the housewife's, salad maker's, and gourmet's tastes. They include **black pepper**, white pepper, cayenne pepper, onion, garlic, celery, oregano, parsley, basil, rosemary, marjoram, paprika, mustard, sage, dill, savory, tarragon, bay, allspice, cardamom, cinnamon, clove, coriander, ginger, nutmeg, thyme, turmeric, mace, wintergreen, **peppermint**, and the citrus oils, especially lemon and grapefruit oils. Any of these, to suit the taste, may be used to. . .

DETD EXAMPLE 1-**PEPPERMINT** OIL

DETD . . . grams of monodiglyceride of sodium sulfoacetate was added while stirring with a motor driven impeller. Then 150 grams of natural **peppermint** oil was added under the surface of the melt at 115.degree. C. with continued stirring until all of the essential. . .

DETD . . . breaking of the solid-flavor isopropanol-slurry with a motor driven impeller blade. The excess alcohol was drained off and the solid **peppermint** flavor material was dried under vacuum. An excellently flavored solid **peppermint** oil of 1.63 percent moisture was obtained.

DETD EXAMPLE 5-RED PEPPER (CAPSICUM) OR **BLACK PEPPER**

DETD . . . pounds steam pressure. At this temperature, 60 grams of a monodiglyceride of sodium sulfoacetate were added, followed by 500 grams **Capsicum Oleoresin** (African, 500,000 pungency).

DETD . . . wine, cider, lime juice, lemon juice, orange juice, and the like. If desired, even chopped fresh vegetable particles such as **mint** leaves may be added.

DETD . . . be substituted in such proportions as desired to yield appropriate totals. Also, other flavors may be used such as lemon, **peppermint**, and ginger.

ACCESSION NUMBER: 71:38479 USPATFULL
TITLE: LIQUID SALAD DRESSING BASE
INVENTOR(S): Swisher, Horton E., Upland, CA, United States
PATENT ASSIGNEE(S): Sunkist Growers, Inc., Los Angeles, CA, United States

| | NUMBER | DATE |
|---|---|---|
| PATENT INFORMATION: | US 3615702 | 19711026 |
| APPLICATION INFO.: | US 1968-784873 | 19681218 (4) |

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Jones, Raymond N.
ASSISTANT EXAMINER: Hunter, J. M.
LEGAL REPRESENTATIVE: Weilein; Paul A.
NUMBER OF CLAIMS: 6

LINE COUNT: 332
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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